CONTRACT AGREEMENT

THIS AGREEMENT entered into this _17th_ day of _December_, 2001 between THE SIDWELL COMPANY, St. Charles, Illinois, hereinafter called "Sidwell," party of the first part, and Rush County, Indiana, a government entity, hereinafter called "the County," party of the second part, WITNESSETH:

THAT WHEREAS, The Sidwell Company is in the business of providing Aerial Photography, Photogrammetric Mapping, Geographic Information Systems development and related services for various governmental agencies in the United States; and

WHEREAS, the County is desirous of having The Sidwell Company provide Aerial Photography, Digital Orthophotography and related Geographic Information System services;

NOW, THEREFORE, in consideration of the mutual agreements hereinafter made, the recitals of fact hereinabove set forth, and other good and valuable consideration, the receipt of which is hereby acknowledged, the parties agree as follows;

The Sidwell Company will perform the services and deliver the products described in the technical work plan that follows. The project area includes all of Rush County, Indiana.

Contract Agreement

TECHNICAL SPECIFICATIONS

AERIAL PHOTOGRAPHY

Project Area

The Sidwell Company will acquire new, black and white aerial photography covering all of Rush County, Indiana in the spring of 2002. These aerial surveys will be used to support the creation of digital orthophotos for the GIS database. Two different scales of photography will be obtained during this aerial survey. Control survey targeting will be performed and completed prior to securing the photography.

The Sidwell Company will capture low flight photography, at an altitude of 5,000 feet above mean terrain, covering the following incorporated cities, towns and environs as defined by the county on plat book pages provided to Sidwell.

- Rushville and environs nearby Rushville
- Circleville
- Moscow
- Raleigh
- Manilla
- Homer

- Glenwood
- Arlington
- New Salem
- Mays
- Milroy
- Carthage and environs nearby Carthage

The Airborne Sensing Corporation will capture high flight photography, covering all of Rush County, at an altitude of 15,840 feet.

Aerial Photography

Aerial Photography Environmental Conditions

All aerial photography will be obtained during the Spring of 2002, when the sky is sufficiently clear, deciduous foliage is dormant and when the ground is not obscured by snow, haze, smoke, dust, cloud shadows or other ground cover. The lighting conditions will be such that the sun is more than 30 degrees above the horizon.

All aerial photography will conform to the minimum requirements of the American Society of Photogrammetry and Remote Sensing (ASPRS) and the USGS "Standard Specifications for Aerial Photography for Photogrammetric Mapping". Aerial photography that does not meet defined specifications will be corrected at no additional fee.

Aircraft and Crew

Each aircraft will be equipped with all essential GPS navigational and photographic instruments. Each flight crew used on the project will consist of a commercial-licensed pilot and a camera operator, each with multiple years of experience in aerial photographic missions.

All aircraft will be operated and maintained in accordance with the regulations of the Federal Aviation Administration and Civil Aeronautics Board. The airplanes have been modified such that, when the camera is mounted with all its parts above the outer structure, an unobstructed view is obtained, shielded from exhaust gases, oil, effluence, and air turbulence. No window of glass or other material will be interposed between the camera and the ground to be photographed.

Sidwell aircraft have a proven service ceiling with operating load of 20,000 feet above mean sea level. Airborne Sensing Corp. aircraft have a proven service ceiling with operating load of 27,000 feet above mean sea level.

Aerial Cameras

For this project Zeiss RMK TOP and Zeiss JENA LMK precision aerial mapping cameras will be used. They will be equipped with low distortion, high-resolution lenses and forward motion compensation (FMC) designed for vertical aerial photography with a 9" x 9" format.

Aerial Film

Only new, Kodak Double-X Aerographic Estar or equivalent fine grain, high-speed panchromatic aerial film will be used. The film will be stored and used in compliance to the manufacturers specifications.

Flight Plan

Flight plans for the two different scales of photography will be prepared. The photographic coverage of any flight line will extend at least two exposures beyond the county boundaries.

The high flight aerial survey will be conducted to obtain photography at a negative scale of 1"=2,640' covering all of Rush County. Each flight line shall be flown continuously across the project area without interruption. The low flight aerial survey will be conducted to obtain photography at a negative scale of 1"=840' covering all cities, towns and villages and in Rush County. Flight lines are oriented north south and will cover an area one mile wide from east to west.

Sidwell shall notify the county project manager of the appropriate week of flight, and then shall notify the county project manager first thing/immediately on the morning of the actual flight.

Forward Overlap

Photography will be obtained such that consecutive photos in each flight line shall have an average overlap of 60 percent to ensure not only stereoscopic coverage but also exposure selectivity for final digital orthophoto processing.

Tip, Tilt and Crab

Tip and tilt of the camera from vertical at the instant of exposure will not exceed three degrees, nor will it exceed five degrees between successive exposures. Average tip and tilt over the entire project area will not exceed one degree from true vertical. Crab will not exceed five degrees between any two consecutive photographs nor more than three degrees on any one flight line.

The combined effect of aircraft course corrections will be kept well within the specifications and will conform to the minimum requirements of the ASPRS and USGS specifications for aerial photography for photogrammetric mapping. New photography will be acquired to replace rejected photographs or flight lines.

Aerial Photography

Film Processing

To ensure uniform contrast and density control of negatives, all aerial film will be processed in a Kodak Versamat 11c-MG automatic film processor. The processing, including development and fixation, and washing and drying of all exposed photographic film, shall result in negatives free from chemical and other stains, containing normal and uniform density, and fine grain quality.

Exposure and processing shall be such that the negatives will be of high quality showing the demarcation of all features discernible at the required scale. The negatives shall be free from static marks, shall have uniform tone, and shall have the proper degree of contrast for all details to show clearly in the dark areas and highlight areas, as well as in the halftones between the dark and the light.

Quality Control

Sidwell will supply ten (10) random contact prints from the raw film from each of the high and low flights for review by Rush County. Review shall take place within seven (7) days of receiving the prints.

Film Storage and Ownership

The exposed aerial film is the property of the County and will be delivered immediately upon request. Unless it is requested otherwise by the County, The Sidwell Company will store the aerial film under appropriate atmospheric conditions for a period of ten years at no additional cost to the County.

SIDWELL

PHOTOGRAPHY SECURED WITH AIRBORNE GPS

Photography
Secured with
Airborne GPS

General

For the high flight photography only, The Sidwell Company will employ the services of Airborne Sensing Corporation (ASC). ASC will act under the management of The Sidwell Company for the AGPS control only. These services will complement the low flight aerial photography and digital orthophoto services of The Sidwell Company. All high flight photography will employ AGPS techniques.

ASC will use one dual frequency NovAtel receiver in its aircraft and one equivalent receiver on the ground at a point near the airport of departure. Another equivalent receiver will be placed on a station at a different location in the appropriate block based on its suitability for long duration kinematic data logging.

Ground control points will be selected on the basis of available data and best geometry. ASC does not recommend the use of vertical control values without ground verification. The block rigidity of GPS aerotriangulation is so great that poor values will distort an otherwise acceptable block. For the blocks, ASC will select one point in each geometric corner of the block using either pre-paneled or clearly photo-identifiable points. These will be reserved for eventual block adjustment using drift parameters, if those are necessary. The X-Y-Z values for the antenna centers will be provided to The Sidwell Company. The nominal vertical offset values between the antenna and camera projection center will also be given.

Aircraft Configuration

For the airborne GPS system, ASC will log at 1.0 second epochs for the 1"=2,640' scale photography.

Ground Stations

The ground stations will be distributed as indicated in the general approach above. If drift parameters are being employed, the distance limit of base to survey area is 250 miles. Dual frequency receivers are not necessary and no initialization is required. A second base is for system redundancy.

If drift parameters are not being employed and we are dependent on ambiguity establishment on the ground and/or ambiguity resolution on the fly, then the base must be within 12.5 miles of the take off point and the aircraft cannot depart more than 18.5 miles from any base. When this second case is employed, the second base station trajectory usually differs from the first by less than 1-2 cms x,y,z. Therefore, it does not offer any inherent "strengthening of geometry function."

For quality control and checkpoints for future FAAT, a minimum of 7 points spread throughout the project area will be pre-paneled prior to securing aerial photography.

Post Processing of Recorded Data

ASC uses either TOPSCAN GPS or Waypoint GRAFNAV post processing software. Both determine independent antenna centers for eventual bundle block adjustment with or without the application of drift parameters. The differences between the two are as follows:

Photography Secured with Airborne GPS

TOPSCAN GPS: Does not require initialization on the ground. It does require 5 common satellites being tracked for a minimum of 600 seconds continuous and common tracking for base and air, with a total continuous tracking time of 1.00 hour. It uses a triple differencing technique with numerous built in forward and reverse runs and executes a least squares adjustment for the entire trajectory as processed for its final solution.

This software is a multi-stage process and errors in the raw data are detected within 1 hour of running the program. ASC has used this software in a number of projects where the base station has been either within or outside the block. This process is not interactive in that only the base station coordinates and elevation mask angles can be set. Output is in X,Y,Z Cartesian, UTM, Geographic or State Plane coordinates in NAD27 or NAD83, or user definable ellipsoids, with ellipsoidal heights.

GRAFNAV: This does not require, but prefers initialization on the ground and can exploit KAR processing if the receiver is within 18.5 miles of the base. The processing technique is somewhat different, in that ambiguities must be established and kept locked during the flight, although this has not inhibited our flight line patterns to date.

This software is more interactive, allowing more parameters to be set. This is a single stage process and more fault tolerant of missing epochs than is Topscan. In its final run, it inverts the process and executes a statistical comparison between the two. Output is in X,Y,Z Cartesian, UTM, Geographic or State Plane coordinates in NAD27 or NAD83 with built-in addressing of popular undulation modeling programs (GEOID93, GSD95, OSU91).

Deliverables
ASC will deliver all recorded data on a media mutually acceptable to The Sidwell Company. Until aerial triangulation has been completed, ASC will store an additional copy of all recorded data at no cost to the County.

SIDWELL

DIGITAL ANALYTICAL AERIAL TRIANGULATION

General

Obtaining all the required control points for a GIS project using field survey would be cost prohibitive as well as time consuming. Digital fully analytical aerial triangulation (FAAT) techniques shall be used to extend and densify the surveyed control information for the aerial photography and subsequent digital orthophotography.

Sidwell will utilize aerial triangulation techniques appropriate for scaling to produce orthophotos at 1"=400' and 1"=100'. All ground positions determined by aerial triangulation will be in the Indiana State Plane Coordinate System, NAD83. Elevations of monumented positions will be used in FAAT computations when they are available.

Softcopy photogrammetric workstations will be used for analytical aerial triangulation. Use of this technique will negate the need for point marking diapositives through an emulsion drilling process, thereby reducing the handling and damaging of film. Analytic aerial triangulation is a specialized process that was developed for generating positional (coordinate) values for all required control points using a skeleton network of known control points.

This is accomplished by comparing relative measurements between all required control points, which establishes the spatial relationship between points as they appear on the photography. Then, applying known coordinate values for some points and using formulas comprising the basics of analytic geometry generate coordinate values generated for thousands of additional control points. The triangulation procedure is a computer process that utilizes a customized software application developed by professional mathematicians.

Scanning

Image scanning will be accomplished on a Zeiss SCAI photogrammetric scanner. This scanner has a geometric accuracy of approximately 2.0 microns in X and Y over the entire image scanned. The 1"=2,640' images will be scanned at a resolution appropriate for yielding a pixel size of 2 feet. The 1"=840' images will be scanned at a resolution appropriate for yielding a pixel size of 1/2-foot.

Tie Points

Tie points will be used to join adjacent photographs in the same flight line and adjacent flight lines. They will be selected and numbered by automatic or semi-automatic techniques. A minimum of 9 tie points per photo will be used.

These points are selected using image correlation techniques of pyramid images for each stereo-model. The software contains constraints, which will reject erroneous points.

Block Generation

The County shall be developed into a block and sub-blocks made up of the various flight lines and photographs required for the project. The number of tie points generated will be in the hundreds.

Digital Analytical
Aerial
Triangulation

SIDWELL

Digital Analytical Aerial Triangulation

Block Measurement

The photo image tie points will be measured automatically in the digital environment using ImageStation software. Ground control points will be measured in a semi-automatic mode. The data will be organized for adjustment processing in strips, sub-blocks, and then blocks.

Block Adjustment

Digital Analytical Aerotriangulation (DAAT) processing will be accomplished using PAT-B software by INPHO. This package has error detection and flagging routines as well as earth curvature correction.

Aerial Triangulation Report

Upon completion of aerial triangulation, a report will be prepared summarizing the process and detailing the results for adjusted control and tie points. An ASCII file containing all point numbers and coordinates will be provided.

Quality Assurance

Ground control configurations are selected which will provide not only the required number of points, but also will aid in the detection and resolution of error. Part of the function of the aerotriangulation software is the ability to isolate and identify points, which may suffer from errors of control, point misidentification, or incorrect point numbers. These points will then be researched and the problems resolved prior to moving to the next step of production. Sidwell policy requires a quality assurance staff member to review results of each step before the production staff is permitted to continue with the next task.

7
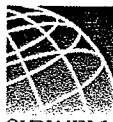
DIGITAL ORTHOPHOTOS

General

Digital orthophotos will be produced from the high flight photography to create imagery with a 2-foot pixel resolution. In addition, digital orthophotos will be produced from the low flight photography to create imagery with a 1/2-foot pixel resolution. The digital orthophoto production process requires a series of steps that includes scanning, creation of digital elevation models, differential rectification of images and image output.

Scanning

Image scanning will be accomplished on a Zeiss SCAI photogrammetric scanner. This scanner has a geometric accuracy of approximately 2.0 microns in X and Y over the entire image scanned. The 1"=2,640' images will be scanned at a resolution appropriate for yielding a pixel size of 2 feet. The 1"=840' images will be scanned at a resolution appropriate for yielding a pixel size of 1/2-foot.

Digital Elevation Model

Before image processing can be accomplished, digital elevation models or DEM's will be created. The DEM's are files containing three-dimensional point and/or breakline information that are collected to define the shape of the surface of the earth within Rush County. Points will be measured using softcopy processing. Photogrammetric technicians perform orientation procedures as well as interpret and measure surface information on each stereo model.

These tasks will be performed using a ImageStation digital image softcopy analytical stereoplotters. The stereo model will then be examined to be sure that the data collected properly represents the surface measured. Additional randomly placed points will be used to supplement any areas that require further definition. The data will be collected with a density sufficient to meet the required accuracy and in accordance with the best standards of professional mapping practice.

Image Rectification

The digital orthophoto process is one that corrects the image for horizontal displacement due to relief and camera tilt. Digital image differential rectification will be performed using ImageStation software by Z/I Imaging. The raw images will be loaded and viewed. Interior orientation will be performed using data from the camera calibration report.

Exterior orientation will be performed using the analytical aerial triangulation control data. The DEM data previously collected will be processed to create a triangular irregular network or TIN file. This TIN file forms the surface to which the raw image is corrected. The properly oriented image is then resampled pixel by pixel considering the TIN file to produce an image that is orthographically correct at a final pixel size.

Image Radiometry

Image brightness will be represented by 256 shades of gray levels ranging from 0 to 255. The specific range selected for the digital orthophotos will display the most pleasing photo image. Special attention will be paid to the light and dark areas to ensure that valuable image detail is not lost in shadows or areas of high reflection.

Digital
Orthophotos

Mosaicking

The ortho rectified images will be mosaicked together to form a continuous image blanket for an entire area identified by a particular photo scale. Each image will be geocoded so as to appear in their correct geographic location when viewed. These images will reference the Indiana State Plane Coordinate System.

Mosaicking will be accomplished by defining the optimum boundary within image overlap at which one image should blend into the next. This boundary will be selected so as to minimize mosaicking through buildings or other objects that would reveal a change in photographic perspective. The blending will be feathered to minimize the appearance of separate images. The resulting mosaicked orthophoto will then be divided into tiles that conform to the format described below.

Image Tiles

The images will be cut into grid coordinate based tiles for each scale of photography.

Image Output

Digital orthophoto images will be delivered to the County in TIFF format with world files. Image tiles will be transferred uncompressed to compact disks for digital delivery to the County.

Quality Control

All equipment will be calibrated prior to, and periodically throughout, the production process. Any equipment not meeting acceptable standards will have the appropriate corrections made to bring that instrument back into compliance. Until those corrections are made, that piece of equipment will be removed from production.

Each step of the production process that involves human judgment is checked by another technician prior to moving on to the next step. This checking process serves to ensure completeness and accuracy of the final product. The accuracy tolerances of all set-up procedures are coded into the software packages according to the project specifications. This coding prevents the technicians from inadvertently proceeding with a step that is out of tolerance. Orthophotos are always compared with the control and surface files to be sure that the processing occurred correctly.

The county will review the first township delivery of the orthophotography for acceptance or rejection within seven (7) days of receiving the product.

Digital
Orthophotos

SIDWELL

CADASTRAL MAPPING

General

Cadastral data conversion is the process of creating a digital database delineating all real parcels of property within Rush County, approximately 12,000 parcels. An integral component to the finished cadastral database is Rush County's existing parcel numbering system, as well as the implementation of a new permanent parcel number. The parcel number will serve as a key element through which further GIS functionality and analysis capabilities will be added. The entire process involves a variety of production steps, described as follows.

Data Collection

The necessary land record documents will either be microfilmed or scanned. This process allows us to have a copy of all documents in-house, available when they are needed. With respect to the thousands of documents to which we will need access, we do not wish to consume valuable staff time and labor for this process over the course of the project. Microfilming or scanning is easily performed and a very cost effective approach for data capture.

A Sidwell Project Manager will conduct a site visit to review the existing maps, available plats; surveys and other land records and make plans for data collection activities. Once a determination has been made on what to capture, a session will be scheduled for completion of all microfilming or scanning. A small area in the county building will be required for two to three days to complete the data collection process. Sidwell labor will be used for most of this work with the intent on minimizing the disruption to daily activities at the County. However, some coordination assistance from the County staff will be required.

All plats, surveys and other related documents at the county offices will be captured. Sidwell will also attempt to obtain copies of highway strip maps from the Indiana Department of Transportation. The Project Manager will establish procedures with County staff for ongoing transmittal of copies of subdivision plats that are recorded after the data collection visit, but prior to the start of cadastral data conversion for a particular geographic area or township.

During startup data collection activities, procedures will also be established to acquire a digital copy of the Rush County tax assessment roll for use at Sidwell during cadastral data conversion. The tax roll will be requested in segments throughout the project so that Sidwell receives the most current data for a township or group of townships just prior to starting conversion for those same areas.

Parcel Research

While the items listed above comprise the basic sources from which the cadastral database will be compiled, it is expected that some individual parcel research will be needed as conversion proceeds. The Sidwell Project Manager assigned to this project will work with County staff to determine what is needed and the most effective and timely manner in which to acquire it during the conversion project.

Cadastral Mapping

SIDWELL

Sidwell's approach will be to precisely construct all parcels using the tax roll descriptions as the primary data source. In cases where this information proves inadequate, parcel research will be performed. At this point, a determination will be made as to the resolution of the discrepancy. In all cases where parcel research has been performed, an entry will be made in a Discrepancy Report identifying the parcels affected, the nature of the problem, and the course of action taken to resolve the situation.

Sidwell will request copies of deeds, as they are needed during parcel construction. In situations where the deed book and page number is contained in the tax roll or on the property record card, this number will be listed in the deed request documentation.

Cadastral Database Production

The final cadastral database will contain information for one large contiguous area on the ground. To accurately reflect the same spatial relationships that exist on the ground, the individual contents of the database will be referenced to their relative position on the ground. This is accomplished by orienting all information to a known geographic coordinate system; in this case the Indiana State Plane Coordinate System. The digital orthophotos being created as a part of this project will already be oriented to this coordinate system. The digital orthophotos will provide the base framework upon which all other database information is built.

The software that will be used for compilation of the cadastral database will include Bentley Systems' GeoGraphics, along with customized data input macros developed by Sidwell. Construction of parcels will be accomplished by using information from existing map sources and the legal description as taken from the current tax roll and property record cards. Subdivision information will be gathered from the original subdivision plats.

Cadastral data will be constructed using a combination of input techniques, including coordinate geometry and precision placement for subdivided parcels, and precision placement and digitizing for non-platted metes and bounds parcel boundaries. The digital orthophotos will serve as a base to reconcile parcel boundaries against ground occupation (evidence). The actual mapping process includes the work phases summarized below:

The first phase includes complete planning of all operations necessary for delivery of the project. During this phase, digital orthophoto data is loaded onto our production system. Simultaneously, source records are obtained. They are sorted, first by township and then by section. Using the digital orthophotos, county tax roll, property record cards, subdivision plats and survey copies, GIS technicians perform preliminary layout and initial digitization of physical features.

Hydrological features are directly digitized as they appear on the digital orthophotography. These include all named bodies of water including rivers, creeks, streams, ditches, ponds, and lakes. These features will be placed either as single lines (centerlines) or double lines (banks), as they appear on the original cadastral maps. Boundaries and annotation from the Public Land Survey System are also placed, which include township, range, and section boundaries.

Next, right-of-way centerlines, boundaries, dimensions and annotation (names and symbols) are placed. Precise distances are keyed in and the right of way is expanded from

Cadastral Mapping

SIDWELL

Cadastral Mapping

the centerline as it appears on the digital orthophoto. The right of way will also serve as a control element when constructing metes and bounds parcels with limited dimensional information. For all right-of-ways, distances will be taken from the existing plats and orthophoto occupation. Special care is taken to ensure that right-of-way boundaries are oriented to the digital orthophoto.

Next, all recorded subdivision data is entered, including subdivision boundary and original lot lines, and all text annotation. This information is created using a combination of coordinate geometry, precision input and digitizing techniques. Whenever possible, primary cadastral map features will be correlated with physical features on the orthophoto base map for proper registration and match to ground occupation. Permanent parcel block numbers are assigned at this stage of the mapping process.

Following that, non-platted and metes and bounds parcels are drawn into the GIS database with boundary dimensions and acreage from its tax roll description. For those parcels that lie outside of subdivisions, every attempt will be made to input by coordinate geometry or precision placement methodology. When distance information is not available and the parcel cannot be constructed, the orthophoto will be used as a base upon which to reconcile parcel boundaries.

Permanent parcel numbers will also be assigned and placed in the graphics database. This process is known as parceling and uncovers errors in descriptions and other problems. If necessary, the tax roll, deeds, subdivision plats or other records may be researched at this stage to resolve conflicts due to inadequate information on the existing maps.

The parcel number will serve as the key element to ensure a one to one relationship between parcel polygons in the GIS and records in the attribute database. The cadastral database is now ready for quality control procedures and topological data structuring for delivery as an ESRI Arc/Info project.

Compilation Requirements

The following compilation requirements will be adhered to:

Edge Matching - All captured line features must be both visually and coordinate edge matched with features in adjacent files or other artificial boundaries within a file. No edge match tolerance will be allowed.

Common Boundaries - All graphic features that share a common boundary, regardless of digital map layer, must have the exact same digital representation of that feature in all common layers.

Point Duplication - No duplication of points that occur within a data string is permitted.

Connectivity - Where graphic elements visually meet, they must also digitally meet. All confluence of line, area, tangent, and polygon data must be mathematically exact. No "overshoots", "undershoots", offsets, or "pseudo nodes" are permitted. Lines that connect polygons must intersect those polygons precisely; that is, every end point must be an intersection point of the respective polygon.

SIDWELL

Cadastral Mapping

Line Quality - A high quality cartographic appearance shall be achieved. Transitions from straight line to curvilinear line segments shall be mathematically tangent, smooth, and without angular inflections at the point of tangency. No zero length line features shall be included. Curvilinear graphic features should be smooth with a minimum number of points. When appropriate, line-smoothing routines shall be used to minimize the angular inflection in curvilinear elements. The two terminus points shall define all straight lines.

Segmentation - The digital representation of linear elements must also reflect the visual network structure of the data type. All data elements representing differing features shall be distinguished in the database by layering or other effective method. An element should not be broken or segmented unless that segmentation reflects a visual or attribute code characteristic, or unless the break is forced by data base limitations.

Point Criteria - All point features shall be digitized as a single X, Y coordinate pair at the visual center of that graphic feature.

The structure of the parcel data will not inhibit the execution of GIS functions across boundaries or artificial discontinuities (file edges or other delimitation). All polygons and lines shall be verified prior to delivery for proper closure and connectivity as appropriate.

Annotation - The orientation and display of annotation shall follow accepted rules for cartographic production to ensure high quality; readable, and aesthetic map products for display and plotting.

Annotations shall be placed:

- To obscure the minimum amount of other map features
- Along linear features
- To be uniform in orientation throughout the data base
- To be correct in regard to grammar and spelling
- Once for identical features that occur in close proximity to each other

13

SIDWELL

PARCEL NUMBERING AND PLOTTING

Permanent Parcel Numbering System

Sidwell will use Rush County's existing parcel numbering system. In addition, Sidwell will create a new uniform permanent parcel numbering system, in accordance with the Indiana Department of Revenue, as a means of identification and organization of records covering all real property. The various parts of the property index system combine to form the property identification number. The component parts are always listed in the same sequence.

The index number is a combination of the governmental survey township, section, quarter section or block, and parcel number. The 18 digits of the permanent parcel number are for the purpose of geographical location and identification.

The permanent parcel number consists of 18 digits as follows:

XX	XX	XX	XXX	XXX.XXX	XXX
Group 1	Group 2	Group 3	Group 4	Group 5	Group 6

- Group 1: Two (2) digits designate the county. There are 92 counties in Indiana; therefore the first county will be 01, and the last county will be 92.

- Group 2: Two (2) digits designate a survey township, also known as a congressional township.

- Group 3: Two (2) digits designate the survey section number. Section 1 will be 01, and Section 36 will be assigned 36.

- Group 4: Three (3) digits designate block numbers and quarter sections.

- Group 5: Three (3) digits, decimal point, three (3) digits designate the parcel numbers.

- Group 6: Three (3) digits designate the taxing district as assigned by the State Board of Tax Commissioners

Parcel Number Control System

Sidwell has developed the Parcel Control System (PCS) software for the purpose of managing the parcel numbering system. Normally under the standard Sidwell numbering system, a parcel number is retired when the description of the parcel changes through division or consolidation. This program will include a digital data file containing all parcels in the county. The capability to create this listing in hard copy form is a function of the deliverable program.

Plotting Routines

Sidwell will provide Rush County with predefined plotting routines, map frame files, instructions and training to enable the county to produce plotted maps for this project. The standard map sheet size will be 22 inches x 34 inches. In addition, the county will be enabled to produce maps at half-size, which will reduce the sheet size to 11 inches x 17 inches. Furthermore, the plotting routines will allow the county to produce cadastral plots with or without an orthophotographic background. Sidwell will prepare the cadastral data

Parcel Numbering and Plotting

14

for the efficient production of 1" = 400' plots covering the entire county. Each plot will cover two survey sections and contain an area one-mile wide east-west and two miles wide north-south.

We will also prepare the cadastral data for the efficient production of 1"=100' plots for the urbanized (subdivided) areas of the county. Each map at this scale will cover an eighth of a survey section and contain an area one-quarter-mile east-west by one-half-mile north-south.

Each cadastral map plot file will include a full title block and legend showing adjacent page references, county and township names, page number, scale references, map disclaimer, plot date, and geographic location diagrams.

Parcel Numbering and Plotting

15

SIDWELL

QUALITY CONTROL/QUALITY ASSURANCE

General

At Sidwell, quality control is an integral component of our production environment. As such, it is both an informal process, and a formal set of procedures. Informally, each Sidwell technician, regardless of their position or level of experience, has the authority and is expected to question work performed by others when questions arise. As a given area moves through the production process, several technicians review it. This process maximizes product quality while enhancing staff development.

Formally, all converted data is checked prior to topological data structuring. Our most experienced cadastral mapping technicians, who include department managers and their assistants, perform quality control.

Every compiled feature is checked by these high-level technicians against the original source documents to ensure accuracy and adherence to Sidwell map product standards. All data is checked against the digital orthophoto imagery on-line at the GIS workstation to verify registration and alignment. Then corrections are made to the database (usually by the technician who originally compiled the area). These corrections are then checked to ensure that they were done properly. If additional corrections are required, the process is repeated. Processed data is checked via automated software routines that ensure a one-to-one correspondence between polygons and centroids. Errors are immediately highlighted and corrected by the GIS data technician. The process is repeated until no errors are found. After all map checking is performed, routines are run to create shapes out of all parcels. This serves as another check for polygon closure and creates shape representations of the parcels, which are useful in using low-end "GIS viewer" software packages such as ArcView.

Technical Quality Assurance

Map quality and data integrity result from years of collective experience. At Sidwell this experience comes from our mapping technicians, analysts and managers - many of whom have been at Sidwell for more than a decade. These mapping experts have refined their drafting and communication skills to deliver to our client's projects that continually surpass their expectations.

Sidwell has been dedicated to the performance of quality services for more than 74 years. This dedication has been recognized as an important factor in establishing us as a GIS leader in the Midwest. Our quality control mechanisms outlined below allow Sidwell to deliver to our clients, products with the highest degree of accuracy and integrity.

Quality Control Mechanisms

Quality control mechanisms exist at every stage of a mapping project. Through a series of checking and re-checking work, high map accuracy and data integrity is achieved. Checking initially takes place in our GIS production department by staff solely devoted to data compilation and checking.

Quality control mechanisms include:

- Map Compilation Check
- First Map Check

SIDWELL

- Database Processing and Linkage Check
- Data Discrepancy Research
- Post Delivery Quality Assurance

Map Compilation Check

Map compilers have digital software tools, developed internally by our Information Systems (IS) department, that give them the ability to check their work and fix any errors quickly. These digital tools also give the compiler the ability to perform automated tasks that can build components of the mapping system more efficiently while also removing some of the human error that would have resulted using older methods.

First Map Check

After all of the data has been compiled and the first maps are created, measures are taken to ensure that each map depicts the original data legibly, logically and accurately. It is the job of the checker to determine that:

- Map elements are represented correctly and are geographically accurate
- Data is accounted for and there is no missing information
- Parcel information is correctly placed and cross-referenced to the appropriate tabular records in the database(s)
- Every map and/or digital file conforms to the current procedures of aesthetic uniformity and consistency

Digital Verification

Topology of all line work related to parcel boundaries must be extremely precise when delivered in a digital format. Sidwell uses the mapping software's existing tools, as well as several tools developed internally, that clean and validate topology while also making the checking of individual features more efficient. A few very important routines used for more automated quality control are described below:

- Feature Checking - Sidwell has tools in place that can rapidly display map elements with the same feature assignments to see that all features are assigned correctly.
- Topology Cleaning/Validation - Digital routines are in place that find topology errors from the most obvious to the most minute. These routines will flag the user as to how many errors are found in the map and where they are located.
- Plot Tag Validation - For digital files intended for plotting, a routine is in place that will validate plot tags. The routine will flag elements without plot tags by highlighting the element with a distinct color. Corrections are made when this information is provided.

Database Processing and Linkage Check

Original data, provided by the client, is used to verify each record in the database, and to make certain they are assigned to parcels in the correct location. Parcel numbers are entered into the system, and linking is performed during compilation. Databases are then consolidated into one master file. The most important tool used to analyze linkages between the database and the maps is a tool called an orphan finder. An orphan refers to a database record that has not been assigned to a parcel number on the map, and vice versa. The orphan finder will flag parcel numbers or records that have not been given an assignment, and the checker will fix those mistakes. The orphan finder is run until no orphans are found.

Quality Control/Quality Assurance

SIDWELL

Quality Control/Quality Assurance

Data Discrepancy Research

Discrepancies in data received for the project will surface at any given stage of production. Our experienced technicians will often resolve these discrepancies using several forms of evidence and common logic. When there are data discrepancies that cannot be resolved in-house, the client is notified either directly through the GIS Production staff or the Project Manager to get more information on these issues.

- Research Questions - Any discrepancy discovered that cannot be resolved is immediately researched. The client will be contacted to provide information and knowledge regarding these problems. Sidwell will use this approved information to make changes that agree with the client's data.

- Discrepancy Reports - A discrepancy report that enumerates all of the significant errors found in their data are provided upon delivery and discussed with the client.

Post Delivery Assurance

If errors arise after final delivery, it is our policy to ensure that any and all mistakes caused by oversight are rectified quickly and correctly. We stand by our products as they leave our facility, and we can guarantee that all products are constructed using every quality control mechanism described above.

Database Content

The following information will be contained in the GIS cadastral database.

- Parcel boundaries, dimensions, and acreages
- Lot lines and dimensions
- Subdivision block numbers
- Subdivision boundaries and names
- County, township and section lines with designations
- Municipal (Corporate) boundaries with designations
- Public streets, roads, and highway rights-of-way with designations
- Railroad and public rights-of-way with designations
- Road and railroad centerlines
- Rivers, streams, ponds, canals, and lakes with designations
- Parcel number identification and centroids

Discrepancy Report

These reports identify parcels that could not be confidently mapped because of conflicting, or missing, source documents. A list of parcel discrepancies is created after all research has been completed. Interpretation of boundaries against the digital orthophoto must be performed in order to reconcile proper alignment when conflicts and gaps occur. Each discrepancy note lists the parcel involved and contains a description of the discrepancy. The parcels included in these reports have been mapped according to the best available information, and the report identifies the action taken with each parcel in question.

The conversion effort cannot solve all parcel discrepancies, as some will require legal or professional surveying services to resolve them. The conversion effort uncovers these problems, and the discrepancy report indicates the nature of the problem along with the action taken during the conversion effort. Ultimately, it is up to Rush County as to whether to accept Sidwell's mapping decision or to apply a different solution.

18

SIDWELL

GIS DATA MODEL

Featurization

For this project, Sidwell will deliver Arc/Info coverages ready for use with ESRI's Arc/Info or ArcView GIS software. While the final project data is proposed as an ESRI platform delivery, all parcel map data will be constructed using Bentley Systems' GeoGraphics GIS software. A library of Sidwell developed data input macros that customize this product into an efficient parcel mapping and plotting environment will also be used.

All map elements included in the GIS will point to a row in a table that defines a specific feature. Elements that represent multiple features (i.e. a parcel line that is also a subdivision boundary, corporate limits boundary and a road right-of-way) will exist once in the GIS project, with a system of multiple feature tags being used to indicate multiple meanings of the elements. Analysis, symbolization and plotting routines can then isolate subsets of the map components as requested by a user. Multiple feature tags will also be used to determine the appropriate features for plotting output scales.

Polygon Topology

Polygon Topology is formatting the graphic data such that it exists as polygons with spatial relationships as opposed to just lines, arcs, text, etc. In its final form, a topologically structured file contains information about each boundary element, including pointers linking it to polygons on the left and right side of the boundary.

Closure of parcel line work will be accomplished using functions within Geographics. Building the full parcel number from semi-automatically reading relevant information directly from the graphics database will automatically create polygon centroids. This minimizes key-in errors. Processed data will be checked via routines that ensure a one-to-one correspondence between polygons and centroids.

Errors are immediately highlighted and corrected by the GIS data technician. The process is repeated until no errors are found.

After all map checking is performed, routines are run to create shapes out of all parcels. This serves as another check for polygon closure and creates shape representations of the parcels, which are useful in utilizing low-end "GIS viewer" software packages such as ArcView.

For this project, Arc/Info will be the preferred GIS software platform. After the initial conversion, tests are performed to ensure completeness of the GIS in the final format. In Arc/Info, Clean and Build functions are executed, and ArcPlot routines are utilized to display the resultant coverages.

Additional steps will be performed to optimize the data set in the Arc environment. Post processing of the Arc/Info coverage involves reorganizing the table and column designs into structures that are familiar and user friendly to Arc/Info users. It is after this process that the final data set is delivered to the client. All parcel data will be delivered as Arc/Info coverages ready for use by Arc/Info or ArcView.

GIS Data Model

19

SIDWELL

GIS Data Model

Data Delivery Format

All cadastral data will be delivered in Arc/Info coverage format, projected to the Indiana State Plane coordinate system (East zone), NAD83 feet. Sidwell will also deliver Arc/Info coverages in multiple formats, as different coverage breakdowns have proven to be best suited for different purposes. A countywide coverage is well suited for regional analysis functions, but more cumbersome to work with in parcel maintenance applications. Smaller (geographic) coverages are more efficient for map maintenance, but are more cumbersome to work with while performing countywide analysis tasks. All coverages will be delivered on CD-ROM. The following data formats will be delivered.

All linear data will be delivered in a multi-featurized format. All linear elements (arcs) will contain one or more values in the FLINK column of the AAT INFO table. Each FLINK will point to a row in an external table, which defines the GIS feature, or features, for each graphic element. This format is optimized for parcel maintenance within Sidwell's Arc/Info based parcel maintenance software toolkit.

All linear data will also be delivered in separate feature-based coverages. Some features will be grouped together; for example, a single line in the linear coverage with subdivision, parcel and lot line features will exist in feature-based coverages for subdivisions, parcels and lots. Coverages in this format are optimized for use by off-the-shelf ESRI GIS products such as Arc/Info Desktop, ArcView, and ArcExplorer.

Annotation layers will be delivered for block numbers, lot numbers, platted road/street names, railroad names, parcel dimensions/acreages, and miscellaneous landmark names.

Polygon coverages will be delivered for all parcels that cover one section of land in urban areas and four sections of land in rural areas. All parcels will be attributized with two PIN numbers; the original and existing Rush County number; and a second PIN based on the Indiana Department of Revenue's ID system.

All parcels will also be delivered as a single, countywide Arc/Info coverage. This coverage will contain both arc and polygon topology.

A complete data dictionary will be delivered in digital format.

Attributization - Relational Joins

The end result from featurizing and topologically structuring all data is a graphic property ownership data set to which attribute data can be interfaced. Each parcel polygon will have an associated centroid, which in turn will be associated with the appropriate parcel number in an attribute table in a relational database management system. This approach allows other tables containing a parcel number key to be linked into the GIS through relational views and joins.

SIDWELL

All standard forms of relational views and joins will be supported by the installed system. The specific limits of these features are determined by the host relational database management system. The GIS will interface with standard 32-bit ODBC compliant relational databases, such as Microsoft Access, Microsoft SQL and Oracle.

Geographic Datum

The final project will contain definitions of where it geographically fits into the digital model of the earth. The data will be referenced to the Indiana State Plane Coordinate System (NAD83), as referenced to the corresponding geodetic datum of the digital orthos. The project will exist as a seamless and edge-matched digital map of the county. Universal Transverse Mercator, Latitude/Longitude, and the State Plane Coordinate System are all supported by Arc/Info.

GIS Data Model

GIS Support Services

GIS SUPPORT SERVICES

Ongoing Technical Support

Sidwell Project Managers will work closely with county staff in developing a plan for a smooth transition from present operations to the new GIS mapping system. Training in the various aspects of using the GIS and generic maintenance issues will be provided as initial deliveries are made, and will be reinforced through subsequent delivery visits. Even after the installed GIS is in place at the County, Sidwell staff is available to provide additional system support (training, special projects, on-site problem solving, etc.) on an "as-needed" basis.

Annually, Sidwell hosts two "GIS and Mapping Conferences" for past and present clients. These education and training sessions, provided at no cost to Sidwell clients, consist of a series of concurrent workshops. The workshops cover a variety of topics ranging from basic legal description interpretation skills to the latest enhancements of GIS software products. This provides an excellent training opportunity for new and existing staff.

In addition to the support listed above, The Sidwell Company will provide speakers to address County and City departments, and taxpayer and civic groups regarding the new geographic information system and mapping program. This includes providing information to the local news media to aid in the understanding of the program by the general public.

GIS Training

In addition to the technical support described above Sidwell will provide specific training for county personnel on the use and maintenance of the data provided. Specifically, 20 days (160 hours) of on-site training is included in this contract. While it is intended that this training will be conducted at Rush County's facilities, the county may elect to have a portion of the training conducted at Sidwell's corporate headquarters in St. Charles, Illinois. Many of our clients find that this complements the on-site training because staff is removed from their normal responsibilities and work environment and therefore isolated to focus on the training alone.

Training will be intensive and hands-on. Students will be challenged to learn and become adept at maintaining the new GIS. The actual curriculum, sequence of topics and pace of the training will be determined collaboratively by Sidwell's and the County's project managers. Training will be broken into separate visits spanning three or four days each. Emphasis will be placed on procedures for loading data deliveries, inquiry access of the digital data, software operation, and basic digital data maintenance procedures.

Software Maintenance

The Sidwell Company will include software maintenance for the installed system for a period of two years at no additional cost. This support provides automatic upgrades to Sidwell software products delivered, but does not include new releases of Sidwell software.

Unlimited telephone support and troubleshooting from Sidwell's software support staff and Project Management department is also provided under the support agreement. The

SIDWELL

initial term of the support agreement will be for 24 months and begins immediately after software and initial data installation. The software support agreement is renewable at one-year (or more) intervals at the County's option.

Tax Cycle System Interface

Rush County currently uses a tax cycle administration software system from Manatron. Sidwell will install an interface between this system and the cadastral database in the GIS project. The cadastral database will be interfaced through the use of a parcel number linkage. The linkage (data pointer) will be attached to the parcel number text and/or a parcel centroid, and the parcel number will serve as the conduit through which inquiries and searches may be conducted.

Sidwell will also install and configure our SidBase software, a set of inquiry routines that permit maps to be accessed from parcel records in the tax cycle system. They also permit direct access to a parcel record in the tax cycle system from the parcel identifier contained in the GIS environment. Users can use any search criteria supported by the tax cycle software to isolate a parcel (searches by owner name, site address, etc.). Once a parcel is selected, the same parcel can be located in the mapping system and displayed on the screen by SidBase. Alternately, a parcel can be selected in the mapping system, and the appropriate tax cycle query screen will be displayed.

SidBase allows users to retain the familiar tax cycle screens and programs with which they are comfortable. Many on-line inquiries can be made through this interface without invoking the more complicated and complex GIS software analysis routines. SidBase provides an excellent user-friendly means for every day inquiry into parcel ownership information. It does not replace the more sophisticated GIS software, which is necessary for higher end functionality and analysis. Also, SidBase does not require any duplication or movement of tax data from the native format in which the program stores the information. These data formats do not necessarily need to be SQL or ODBC compliant.

GIS Integration

A real time, multiple-parcel interface to the Manatron system will also be performed. This interface will allow the thematic symbolization of parcel polygons based on queries from Manatron data. This data will be associated with the GIS through the establishment of remote relational views connected through ODBC data source definitions. Sidwell has developed the interface and data exchange routines needed from the GIS side.

Rush County may incur additional expenses and may need to purchase software development services from Manatron to develop the interface and data exchange routines from their software. Sidwell will coordinate the development of these interfaces directly with this vendor at the county's direction.

GIS Support
Services

23

SIDWELL

DELIVERY ITEMS

The following is a complete list of the products and services to be delivered by The Sidwell Company to Rush County as a part of this project:

Delivery Items

- Spring 2002 aerial survey, countywide to produce photography at a negative scale of 1"=2,640'.

- Spring 2002 aerial survey of all urbanized and subdivided areas, as requested. Aerial photography will be secured at a negative scale of 1"=840'.

- Airborne GPS control survey of the 1"=2,640' high flight.

- One (1) set of digital orthophotos, countywide at 2-foot pixel resolution from the 1"=2,640' photography, and one set of digital orthophotos at a 0.5-foot pixel resolution from the 1"=840' photography. To be delivered on CD-ROM.

- Research, design and development of a contiguous digital cadastral-based geographic information system for Rush County, using the county's existing cadastral mapping and permanent parcel numbering system as the primary data source. Approximately 12,000 parcels will be mapped.

- Discrepancy report of parcels that could not be confidently mapped.

- One (1) copy of all cadastral database files in MicroStation DGN file format on CD-ROM.

- Topological data structuring of the cadastral database, delivered as Arc/Info coverages ready for use in Arc/Info or ArcView GIS software.

- New Permanent Parcel Numbering System in accordance with the format adopted by the Indiana State Board of Tax Commissioners in 1998. Parcel Control System software (PCS). Database pointers (linkages) attached to each parcel number in the mapping database.

- Integration of the cadastral database with the county's Manatron tax cycle administration system.

- One (1) copy of Sidwell's SIDBase software.

- Predefined plotting routines and map frame files.

- All original source materials used in the creation of the County's GIS database. These will be delivered to the county at the conclusion of all work and services on this project.

- On site software and database installation.

- Digital data dictionary.

- All training services listed in this document.

- All technical support services listed in this document.

SIDWELL

- Maintenance of Sidwell software products for 24 months as listed in this document.

- Technical assistance and consultation with the county in training of personnel for the implementation of the geographic information system.

The following information and data are required to ensure the accuracy and completeness of the GIS and shall be delivered by Rush County at no charge to Sidwell. All material delivered shall be returned to the County upon completion of the project.

- Provide access to all subdivision plats, deeds, surveys and other documents as requested.

- Provide a digital copy of the county tax assessment roll.

- Deliver any other data, by joint agreement, which shall expedite completion of the project and contribute to the accuracy of the cadastral database.

Rush County agrees that the above information and material will be delivered to The Sidwell Company promptly upon written request.

Delivery Items

SIDWELL

PROJECT COSTS AND MANAGEMENT

Project Costs, Invoicing and Payment Schedules

The services performed for this project will be invoiced as project components are completed, beginning with the acquisition of aerial photography. The project managers will agree to final invoicing terms once the project commences. The costs for the project outlined in this agreement are as follows:

Aerial Photography, Digital Aerial Triangulation, Digital Orthophotography	$92,160.00
Cadastral Mapping (12,000 parcels)	$258,130.00
Plotting Services	$14,160.00
GIS Training	$12,230.00
Tax Cycle System Interface	$5,980.00
TOTAL PROJECT COST	**$382,660.00**

Our costs have been estimated based on Rush County funding this project equally over four (4) county fiscal budget years beginning January 1, 2002. In the event that Sidwell delivers and invoices more work than is budgeted for a given year, the County would not be obligated to make payments on the outstanding balance until the next fiscal year when additional funds are budgeted and become available. The amounts due will carry forward into the succeeding year and become payable at that time.

Each invoice submitted will be accompanied by supporting documentation and is payable net 30 days unless the total invoiced amounts exceed total budgeted amounts as described above. Conversely, budgeted amounts not invoiced and expended in a given fiscal year shall become encumbered and carry forward into subsequent years. Five percent (5%) of the total project costs shall be retained until the project is accepted by Rush County.

The above cost estimates have been based upon mapping approximately 12,000 parcels. Parcels delivered in excess of 12,000 will be invoiced at a cost of $ 21.51 per parcel.

Delivery Schedule

All cadastral mapping and data conversion will be delivered on a survey township by township basis. The project is planned as a three (3) year project with the sequence of deliveries to be determined at the first project meeting. As the cadastral conversion is completed, digital data will be processed for GIS loading and topological data structuring and delivered to the County.

The actual timing of township deliveries will be jointly agreed to during the initial project management meeting. Equal amounts of parcels will be processed every month to spread deliveries over three years. Because townships have differing parcel counts, township deliveries of cadastral data may not be evenly spaced over the course of the project.

Project Costs and Management

SIDWELL

Project Managers

One project manager each from Rush County and The Sidwell Company will be assigned to serve as the authorized representative of their respective organization to direct activities on this project. It is the responsibility of these project managers to coordinate efforts and activities on the project to meet delivery schedules, control project costs, accomplish project objectives and adjust the implementation plan as needed. Any changes in the implementation plan which effect cost, time frames, or products can only be approved by official correspondence signed by the project managers.

Once this contract agreement has been executed, an initial meeting will be held in the county where the project managers will review the implementation plan and confirm schedules for timely completion of the project. The Project Manager assigned to the project from Sidwell will also be present to plan and coordinate initial collection of source documents.

Project Costs and Management

27

SIDWELL

Additional Provisions

ADDITIONAL PROVISIONS

The Sidwell Company agrees to commence the work under this Contract Agreement immediately upon its execution by Rush County and to continue diligently thereafter until all work, services and materials as covered under this contract are completed. The overall completion date for the entire project is thirty-six (36) months or less following the acquisition of aerial photography.

IT IS AGREED by and between the parties that Rush County agrees to pay The Sidwell Company a total fee of three hundred eighty two thousand six hundred and sixty and no/100 Dollars ($382,660.00) as compensation for the work, services and materials as described and provided for under this Contract Agreement.

IT IS FURTHER AGREED by and between the parties that Rush County agrees to pay The Sidwell Company a fee of twenty-one and fifty one-hundredths dollars ($21.51) per parcel for every parcel mapped in excess of 12,000 parcels.

IT IS FURTHER AGREED by and between the parties that The Sidwell Company will submit progress billings for portions of the work and materials as they are completed and delivered to Rush County. It is understood that Rush County will make payments to The Sidwell Company within 30 days of the receipt of a billing invoice or in accordance with a schedule agreed to in writing by and between the parties. The Sidwell Company shall be solely responsible for all sums due Airborne Sensing Corporation hereunder and shall indemnify and hold the County harmless.

The Sidwell Company is solely responsible for the execution and completion of all work elements on this project. It is understood and agreed that Sidwell will be employing Airborne Sensing Corporation as a subcontractor for a portion of the aerial photography acquisition and related services on this contract. However, notwithstanding any provisions contained herein, use of any subcontractor on this project does not relieve Sidwell of any responsibility for the timely and professional completion of all work elements on this project.

The Sidwell Company hereby warrants that all work performed under this Contract Agreement shall be completed in a good and workmanlike manner in accord with the specifications of this contract and in accord with industry standards. Sidwell hereby agrees that this warranty provision will also be made a part of all subcontract agreements on this project.

IT IS AGREED by and between the parties that The Sidwell Company shall be wholly responsible and liable for any accident or injury that happens to any person in connection with the execution of its responsibilities under this Contract Agreement, including, but not limited to, any accident involving any Sidwell owned aircraft or associated aircraft part or any aircraft or associated aircraft part belonging to any subcontractor employed by Sidwell under this Contract Agreement. Sidwell agrees to indemnify, defend, and hold harmless Rush County, Indiana, its officers, employees, and agents from and against all claims, demands, losses, expenses (including attorney's fees), damages, and judgments for damage to real or tangible personal property or for bodily injury or death to any person brought or recovered against Rush County, Indiana, its officers, employees, or agents, if caused or alleged to be caused wholly or in part by the negligence of Sidwell, any Sidwell

SIDWELL

subcontractor, or their respective employees or agents and arising out of this Agreement. The County agrees to give Sidwell prompt notice of any possible liability and Sidwell agrees to defend any such claims or suits asserted or brought against all or any of them. Sidwell's obligation is expressly conditioned upon the following:

- That Sidwell shall be notified in writing promptly of any such claim or demand; and that

- Sidwell shall have sole control of the defense of an action on such claim or demand and of all negotiation for its settlement or compromise; and that

- The County shall cooperate with Sidwell in a reasonable way to facilitate the settlement or defense of such claim. Sidwell shall cooperate with the County's counsel if the County has an interest in the proceeding.

IT IS AGREED by and between the parties that Sidwell shall purchase and thereafter maintain such insurance coverage as set forth below:

A. Workmen's Compensation Statutory Requirements and Disability

B. Employer's Liability $100,000 each occurrence

C. Comprehensive General Liability

> **Sec. 1 Bodily Injury**
> $1,000,000 each occurrence
> $1,000,000 each aggregate
> **Sec. 2 Property Damage**
> $1,000,000 each occurrence
> $1,000,000 each aggregate

D. Comprehensive Automobile Liability

> **Sec. 1 Bodily Injury**
> $300,000 each occurrence
> **Sec. 2 Property Damage**
> $300,000 each aggregate

E. Comprehensive Umbrella Liability

> $5,000,000 each occurrence
> $5,000,000 each aggregate

Certificates of Insurance, naming the County as an "additional named insured" (C through E only), showing such coverage then in force (but not less than the amount shown above) shall be filed with the County prior to commencement of any work. These Certificates shall contain a provision that coverages afforded under the policies will not be canceled or non-renewed until at least thirty (30) days prior written notice has been given to the County. Notwithstanding any other provision of the Agreement, Sidwell shall provide all insurance coverage required by the documents provided to the County. With the approval of the County, Sidwell may substitute different types of coverages for those specified so long as the total amount of required protection is not reduced.

Additional Provisions

SIDWELL

IT IS FURTHER AGREED by and between the parties that all materials and information gathered and/or produced as part of this Contract Agreement are the explicit property of the County and that The Sidwell Company along with any and all of its subcontractors employed on this project are expressly forbidden to further use or market these materials and information without the expressed written consent of the County.

IT IS FURTHER AGREED that either party may terminate this Contract Agreement by giving written notice to the other party thirty (30) days prior to termination. In the event of termination by the County, The Sidwell Company will be paid the earned value of the work performed prior to the date of termination. In the event of termination by The Sidwell Company, the County will only be required to pay for project components that are complete, delivered and acceptable to the County.

This contract, as heretofore described, made and entered into on this _17th_ day of _December_, 2001.

THE SIDWELL COMPANY

By _____
Timothy C. Hopkins, President

TIMOTHY C. HOPKINS personally

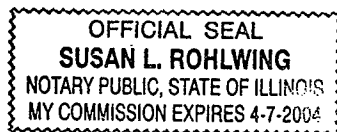appeared and signed before me as an

officer and agent of said corporation this

_28th_ day of _November_, 2001.

_____
Notary

```
OFFICIAL SEAL
SUSAN L. ROHLWING
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 4-7-2004
```

RUSH COUNTY, INDIANA

By _____
Ken Brashaber, President of Commissioners

By _____
Janet Kile, Commissioner

By _____
Marvin Cole, Commissioner

Attest

By _____
Mary Ann Beard, Auditor

30

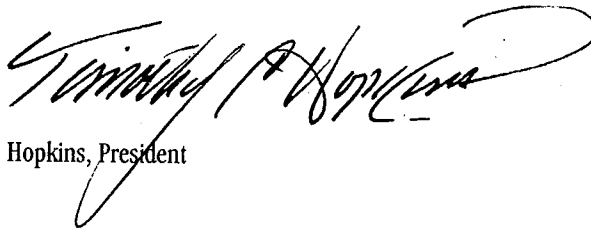SIDWELL

AFFIDAVIT OF EQUAL OPPORTUNITY

As a condition of continuing a contractual or business relationship with the Rush County, Indiana it is hereby certified that this contractor or contracting organization agrees to provide equal employment opportunity to all employees and applicants, and will not discriminate against any employee or applicant for employment because of race, color, religion, sex (except where sex is a bona fide occupational qualification), or national origin. This shall include handicapped persons, disabled veterans, Viet Nam veterans and persons of any political affiliation. Such action shall include but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rate of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination policy.

In signing this affidavit, the bidder or contractor further certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments; and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The bidder, offeror, applicant, or subcontractor agrees that a breach of this certification is a violation of this Equal Opportunity Affidavit. As used in his certification, the term "segregated facilities" means any waiting room, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, sex (except where sex is a bona fide basis for segregated facilities), or national origin, including handicapped persons, disabled veterans, Viet Nam veterans and persons of any political affiliation, because of habit, local custom or otherwise.

On behalf of this organization, I hereby certify that compliance with the above equal opportunity policy is now and will continue to be maintained.

THE SIDWELL COMPANY

Tim Hopkins, President

31

Affidavit of Equal Opportunity

SIDWELL